BRUHAT BANGALORE MAHANAGARA PALIKE

MEASUREMENT SHEET

RA 1ST AND FINAL BILL

Name of work: Improvements to Roads and Drains in Ramachandrapura and Doddabommasandra in Ward No. 10 (Doddabommasandra).

Estimated Cost : Rs. 22.00 Lakhs

Head of Account : P-3726 Zonal Public Works - POW Works

Job Code: 0010-22-000005

Name of Agency: M/s. S S Road Developers, Sri A.S Mani, No. 2/2, 1st Cross, B.S.A Road, Frezer Town, Bangalore - 560005.

Work order No: BMP/EE/BTP/WO/11/2022-23 D: 19-04-2022.

Measurements Recarded on :

Sl No	Description	No.	L	B1	B2	Av.,B	D	Qty	Rate	Amount
1	Earthwork excavation by manual means in ordinary soil involving an average horizontal throw upto 2 meters and an average lift upto 0.5 m, excavated surface leveled and sides neatly dressed, the disposed earth to be leveled neatly after breaking of clods complete as per specifications.								Cum	
	Qty as per Premeasurement Recorded vide E-Bill Page No. 1 to 2 is							**242.29**	175.00	**42401.00**
2	Removing and refixing stone slabs of drains and pointing in CM (1:3)								Sqm	
	Qty as per Premeasurement Recorded vide E-Bill Page No. 03 is							**257.50**	80.00	**20600.00**
3	Providing granite slabs of selected quality roughly dressed having a size of 10 cms thick and fixed in cement mortar (1:6) including fixing curing ete., complete								Sqm	
	Kateramma Temple									
		1	5.00			0.75		3.75		
		1	10.60			0.75		7.95		
	2nd Main Road	1	8.50			0.75		6.38		
		1	11.60			0.75		8.70		
	2nd B Cross	1	12.50			0.75		9.38		
		1	6.80			0.75		5.10		
								41.25		
								41.00	900.00	**36900.00**

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Vidayranyapura Sub Division

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Sl No	Description	No.	L	B1	B2	Av.,B	D	Qty	Rate	Amount
	Measurements Recarded on :									
4	Providing one line dressing to granite stone slab / granite stone masonry as per specifications.								Sqm	
	Kateramma Temple									
		1	5.00			0.75		3.75		
		1	10.60			0.75		7.95		
	2nd Main Road	1	8.50			0.75		6.38		
		1	11.60			0.75		8.70		
	2nd B Cross	1	12.50			0.75		9.38		
		1	6.80			0.75		5.10		
								41.25		
								41.00	900.00	**36900.00**

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Sl No	Description	No.	L	B1	B2	Av.,B	D	Qty	Rate	Amount
	Measurements Recarded on : 01/07/2022									
5	Dismantling of cement concrete pavement by mechanical means using pneumatic tools, breaking to pieces not exceeding 0.02 cum in volume and stock piling at designated locations and disposal of dismantled materials stacking serviceable and unserviceable materials seperately complete as per specifications.								Cum	
	Qty as per Premeasurement Recorded vide E-Bill Page No. 04 is							**53.00**	900.00	**47700.00**
6	Scarifying bituminous course 50mm to 75mm thick along with premix carpet / surface dressing by manual means without disturbing the base and stacking of the debris materials including cost of all labour charges complete as per specifications.								Sqm	
	Qty as per Premeasurement Recorded vide E-Bill Page No. 05 is							**440.80**	64.80	**28564.00**
7	Compaction of original ground with maximum of 6 passes of 8 to 10 tonnes power roller including filling in depression occuring during rolling including cost of all labour, HOM of machinery complete as per specifications.								Sqm	
	Qty as per Premeasurement Recorded vide E-Bill Page No. 06 is							**705.80**	3.00	**2117.00**
8	Providing, laying, spreading and compacting crushed stone aggregates of granite / trap / basalt to wet mix macadam specifications including pre mixing the material with water at OMC in mechanical mix plant carriage of mixed method of tipper to site, laying in uniform layers with paver in sub-base/base course on well prepared surface and compacting with vibratory roller to achieve the desired density complete as per specifications.								Cum	
	Qty as per Premeasurement Recorded vide E-Bill Page No. 07 is							**110.20**	1800.00	**198360.00**
	Recorded on 4/07/2022									
9	Providing and laying Plain cement concrete of mix 1:3:6 with OPC @ 220kgs, with crushed 40mm and down size graded granite metal coarse aggregates @0.89cum and fine aggregates @ 0.46cum, in foundation mechanically mixed, placed in foundation and compacted by vibration including curing for 14 days including cost of all materials, labour, HOM curing, form works, scaffolding and centering complete as per specifications.								Cum	
	Qty as per Premeasurement Recorded vide E-Bill Page No. 08 is							**39.75**	5250.00	**208688.00**
9	Cement concrete pavement.Construction of un-reinforced plain cement concrete pavement, thickness as per design, over a prepared sub base with OPC cement or any other type as per clause 1051.2.2 design mix M20/M30 , with 25mm and down size graded granite metal coarse aggregates and fine aggregtes , with superplastisiser @3lts confirming to IS9103-1999 Reaffirmed-2008 , mixed in a concrete mixer of not less than 0.6 cum capacity and appropriate weigh batcher as per approved mix design, laid in approved fixed side form work (steel channel, laying and fixing of 125 micron thick polythene film, wedges, steel plates including levelling the form work as per drawing). Spreading the concrete with shovels, rackers compacted using needle, screed and plate vibrator and finished in a continuous operation including provision of contraction, expansion, construction and longitudinal joints including groove cutting charges, joint filler, separation membrane, selant primer, joint sealant, admixtures as approved, curing compound, finishing to lines and grades as per drawing complete as per specifications. - M30 (at 360Kg per cum coarse aggregate @ 0.69cum and fine aggregate @ 0.46cum)								Cum	
	CC Road									
	Muneshwra Layout 6th Cross	1	15.00	4.30	4.30	4.30	0.15	9.68		
		1	15.00	4.30	4.70	4.50	0.15	10.13		
		1	15.00	4.70	4.50	4.60	0.15	10.35		
		1	15.00	4.50	5.20	4.85	0.15	10.91		
		1	15.00	5.20	5.20	5.20	0.15	11.70		
		1	15.00	5.20	4.10	4.65	0.15	10.46		
		1	15.00	4.10	4.80	4.45	0.15	10.01		
		1	5.40	4.80	4.80	4.80	0.15	3.89		
	Deduction of Manholes	-5	3.148			1.00	0.15	-2.36		
		Total Qty =						**74.76**		
		Qty Limited to Tender Qty =						**69.30**	5500.00	**381150.00**

4/7/22

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Sl No	Description	No.	L	B1	B2	Av.,B	D	Qty	Rate	Amount
	Measurements Recarded on :									
11	Providing and applying primer coat with S.S. bitumen emulsion on prepared surface of granular base such as WMM including cleaning of road surface and spraying primer at the rate of 0.60 kg / sqm using mechanical means complete as per specifications.								Sqm	
	Qty as per Premeasurement Recorded vide E-Bill Page No. 09 is							**440.80**	20.00	**8816.00**
	Recorded on 20/08/2022									
12	Providing and laying **bituminous macadam** on prepared surface with crushed coarse aggregates as per design mix formula for base / binding course including loading of aggregates with F.E. loader, hot mixing of stone aggregates and bitumen in hot mix plant, transporting the mixd material in tipper to paver and laying mixed materials with paver finisher to the required level and grade, rolling by power roller to achieve the desired density, but excluding cost of primer / tack coat including lead, lift and cost of all materials, labour, HOM of machineries complete as per specifications. MORTH /Chapter 5 - using **40/60 TPH capacity H.M.P. with Mechanical paver Gr-II (50 mm to 75 mm) with 3.3 % VG-30 Bitumen**								Cum	
	Qty as per Premeasurement Recorded vide E-Bill Page No. 10 is							**22.04**	7500.00	**165300.00**
13	Cleaning the existing black topped surface with brooms, soft brushes and finally dusting with old gunny bags and / or compressed air to receive bituminous treatment including cost of all materials, labour, HOM of machineries complete as per specifications.								Sqm	
	Qty as per Premeasurement Recorded vide E-Bill Page No. 11 is							**1248.80**	3.00	**3746.00**
14	Providing and applying tack coat using 80/100 grade bitumen(VG10) on the prepared black topped surfaces at 2.5 kg per 10 sqm, heating bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM of machineries complete as per specifications.								Sqm	
	Qty Vide Item No. 13							1248.80		
								1248.80	7.00	**8742.00**
	Recorded on 21/08/2022									
15	Providing and laying **bituminous concrete 40 mm thick** with hot mix plant, using crushed aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site, laying with a paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH specification clause No. 500.9 complete in all respects complete as per specifications. MORTH Specification No. 509 - **using 40/60 TPH capacity H.M.P. with Mechanical Paver Gr-II (30 mm to 45 mm) with 6 % VG-30 Bitumen**								Cum	
	Kateramma Temple Behind Main Road									
		1	15.00	5.00	4.00	4.50	0.040	2.70		
		1	15.00	4.00	4.50	4.25	0.040	2.55		
		1	15.00	4.50	6.20	5.35	0.040	3.21		
		1	6.10	6.20	6.20	6.20	0.040	1.51		
	2nd Main Road									
		1	15.00	2.80	3.00	2.90	0.040	1.74		
		1	15.00	3.00	4.10	3.55	0.040	2.13		
		1	15.00	4.10	4.20	4.15	0.040	2.49		
		1	15.00	4.20	4.40	4.30	0.040	2.58		
		1	15.00	4.40	3.50	3.95	0.040	2.37		
		1	15.00	3.50	3.40	3.45	0.040	2.07		
		1	15.00	3.50	4.10	3.80	0.040	2.28		
		1	15.00	4.10	3.70	3.90	0.040	2.34		
		1	2.10	3.70	3.70	3.70	0.040	0.31		
	2nd Cross Ramaiah Layout									
		1	15.00	3.80	3.80	3.80	0.040	2.28		
		1	15.00	3.80	3.80	3.80	0.040	2.28		
		1	15.00	3.80	3.80	3.80	0.040	2.28		
		1	15.00	3.80	3.70	3.75	0.040	2.25		
		1	15.00	3.70	2.90	3.30	0.040	1.98		
		1	2.80	2.90	2.90	2.90	0.040	0.32		
	2nd B Cross Ramaiah Layout									
	R/S	1	15.00	5.40	5.00	5.20	0.040	3.12		
		1	15.00	5.00	4.00	4.50	0.040	2.70		

21/08/22

45.49

Sl No	Description	No.	L	B1	B2	Av.,B	D	Qty	Rate	Amount
		1	15.00	4.00	4.70	4.35	0.040	2.61	45.49	
		1	15.00	4.70	4.90	4.80	0.040	2.88		
		1	3.00	4.90	4.60	4.75	0.040	0.57		
	Deduction of Manholes									
		-4	3.148			1.00	0.040	-0.50		
		-6	0.60			0.60	0.040	-0.09		
		Total Qty =						**50.97**		
		Qty Limited to Tender Qty =						**49.95**	9000.00	**449550.00**

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Sl No	Description	No.	L	B1	B2	Av.,B	D	Qty	Rate	Amount
	Measurements Recarded on :									
16	Road Marking with Hot Applied ThermoplasticCompound with Reflectrising Glass Beads on Bituminous Surface/Concrete Surface: Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads at 250 gms per sqm area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35 standards specified. The finished surface to be level, uniform and free from streaks and holes complete as per specifications.								Sqm	
	Kateramma Temple Behind Main Road									
		2	15.00			0.10		3.00		
		2	15.00			0.10		3.00		
		2	15.00			0.10		3.00		
		2	6.10			0.10		1.22		
	2nd Main Road									
		2	15.00			0.10		3.00		
		2	15.00			0.10		3.00		
		2	15.00			0.10		3.00		
		2	15.00			0.10		3.00		
		2	15.00			0.10		3.00		
		2	15.00			0.10		3.00		
		2	15.00			0.10		3.00		
		2	15.00			0.10		3.00		
		2	2.10			0.10		0.42		
	2nd Cross Ramaiah Layout									
		2	15.00			0.10		3.00		
		2	15.00			0.10		3.00		
		2	15.00			0.10		3.00		
		2	15.00			0.10		3.00		
		2	15.00			0.10		3.00		
		2	15.00			0.10		3.00		
		2	2.80			0.10		0.56		
	2nd B Cross Ramaiah Layout									
	R/S	2	15.00			0.10		3.00		
		2	15.00			0.10		3.00		
		2	15.00			0.10		3.00		
		2	15.00			0.10		3.00		
		2	3.00			0.10		0.60		
		Total Qty =						62.80		
		Qty Limited to Tender Qty =						58.40	350.00	20440.00
	Sub Total									1659974.00
	GST @ 12%									199197.00
									Total	1859171.00

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